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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,117	12/21/2001	Petrus Carolus Maria Frissen	PHNL000765	3128

7590 07/17/2002  
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EXAMINER
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PHAM, LEDA T

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/028,117

Applicant(s)

FRISSEN ET AL.

Examiner

Leda T. Pham

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Response to Preliminary Amendment*

1. Preliminary Amendment filed on 5/16/02 has been entered and made of record in the file.  
Claims 1 – 11 are presented for examination.

### *Specification*

2. The disclosure is objected to because of the following informalities: page, 7 line 2 "C21" should be changed to –C12— and also on line 8 same page.

Appropriate correction is required.

3. The abstract of the disclosure is objected to because legal phraseology "comprises" was used. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### *Claim Objections*

4. Claim 2 is objected to because of the following informalities: the phrase "in that part of said two parts" is unclear. The examiner suggests to change to – in that part of said first part and said second part—. Appropriate correction is required.

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 4, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markle U.S Patent No. 6,072,251 in view of Takei U.S Patent No. 5,831,352.

Markle discloses in figures 5,8 and 12 a displacement device with a first part (figure 8) and a second part (figure 12) which are displaceable relative to one another in at least an X-direction and a Y-direction perpendicular thereto, wherein the first part comprises a carrier (798) which extends substantially parallel to the X-direction and the Y-direction and on which a system of magnets is fastened in a pattern of rows (801, 803) extending parallel to the X-direction and columns (800, 802) extending parallel to the Y-direction, wherein an equal distance is present each time between the rows and between the columns, wherein in each row (801, 803) and in each column (800, 802) magnets of a first kind (N) with a magnetization direction perpendicular to the carrier and directed to the second part and magnets of a second kind (Z) with a magnetization direction perpendicular to the carrier and directed away from the second part are positioned in alternation, and wherein a magnet of a third kind (H) with a magnetization direction directed from a magnet of the second kind (Z) to the magnet of the first kind (N) is arranged between the magnets of the first (N) and the second kind (Z), while the second part is provided with a system of electric coils (figure 5) with at least one electric coil of

a first kind (500), with current conductors situated in a magnetic field of the system of magnets and enclosing an angle of substantially  $45^\circ$  with the X-direction, and with at least one electric coil of a second kind (502), also with current conductors situated in the magnetic field of the system of magnets and enclosing an angle of substantially  $45^\circ$  with the X-direction but directed perpendicular to the current conductors of the first electric coil (500). Markle, however, did not disclose the displacement device is provided with a number of sensors sensitive to magnetic fields, which sensors supply a signal which is dependent on the local mutual positions of the permanent magnets of the first part relative to the electric coils of the second part in the region where these two parts overlap.

Takei teaches a displacement device disclosing in figure 7 and figure 8 which is the number of sensors (43) sensitive to magnetic fields, which sensors supply a signal which is dependent on the local mutual positions of the permanent magnets (69) to the electric coils (movable part 2, coil 22) in the region where these two parts overlap.

Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the Markle's displacement device by adding the sensors into the electric coils to sensitive the magnetic fields as taught by Takei for the purpose of detect the field magnet.

Referring to claim 2, Takei discloses in figure 4 that the sensors (43) sensitive to magnetic fields are present in that part of said first part and said second part in which the coil systems are situated.

Referring to claim 3, Takei discloses in figure 8 that the sensors sensitive to magnetic fields comprise Hall sensors (column 6 line 55 -56).

Referring to claim 4, Takei discloses in figure 8 that the sensors sensitive to magnetic fields comprise one of several linear arrays of individual Hall sensors which are situated at regular distances to one another.

Referring to claim 10, Markle discloses in figure 2 that the electric coils are of an approximately rectangular shape and as a result have mutually opposed parallel straight sides, the electric coils of each coil system are arranged such that their corresponding sides are positioned parallel to one another, and Takei discloses in figure 8 each linear array is arranged in a position parallel to a side of the immediately adjacent electric coil and at equal distances to the ends of said side.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Markle and Takei as applied in the rejection against the base claim above, and further in view of Ruppert U.S. Patent No. 4,763,051.

The combination of Markle and Takei refs substantially discloses the claimed invention, except for the added limitations of the individual Hall sensors of each array are connected to an input of a summation amplifier via respective individual differential amplifiers.

Ruppert, however, teaches a device having the Hall sensors (Figure 3, H1, H2, H3, H4) that each array of Hall sensors is connected to an input of a summation amplifier via respective individual differential amplifiers.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the displacement device by connecting each array of Hall sensors to an amplifier as taught by Ruppert. Doing so would provide each different signal in each amplifier.

*Allowable Subject Matter*

8. Claims 5 – 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9176 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

Leda T. Pham  
Examiner  
Art Unit 2834

LP  
July 15, 2002

  
NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
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